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OIPE

RAW SEQUENCE LISTING

DATE: 08/06/2001

PATENT APPLICATION: US/09/773,476

TIME: 15:28:58

Input Set : A:\LEX-0126-USA SEQUENCE LISTING.txt

Output Set: N:\CRF3\08062001\I773476.raw

ENTERED

4 <110> APPLICANT: Friedrich, Glenn
 5 Zambrowicz, Brian
 6 Sands, Arthur T.
 8 <120> TITLE OF INVENTION: Novel Mutated Mammalian Cells and
 9 Animals
 11 <130> FILE REFERENCE: LEX-0126-USA
 13 <140> CURRENT APPLICATION NUMBER: US/09/773,476
 13 <141> CURRENT FILING DATE: 2001-01-31
 13 <150> PRIOR APPLICATION NUMBER: US 60/179,110
 14 <151> PRIOR FILING DATE: 2000-01-31
 16 <160> NUMBER OF SEQ ID NOS: 341
 18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 158
 22 <212> TYPE: DNA
 23 <213> ORGANISM: Mus musculus
 25 <400> SEQUENCE: 1
 26 acttatggat cttcactgca agatggactg ttccaatctc agaggaactc ttccagaaac 60
 27 ctgtatagac tactttggcc ttgaactcct acaggtgggc ctgcctttgc ttctagtgc 120
 28 tgggattaaa ggtgtgtatc accactgaaa aaaaaaaaa 158
 30 <210> SEQ ID NO: 2
 31 <211> LENGTH: 153
 32 <212> TYPE: DNA
 33 <213> ORGANISM: Mus musculus
 35 <220> FEATURE:
 36 <221> NAME/KEY: misc_feature
 37 <222> LOCATION: (1)...(153)
 38 <223> OTHER INFORMATION: n = A,T,C or G
 40 <400> SEQUENCE: 2
 W--> 41 gactgagggg aagtcattga ggcttcaggc ntcttcttcc cagtctcaag acagtgggtg 60
 W--> 42 agtccacagg gaaacggaag atcactnccg cgaccatgng ganctggcct tntangagg 120
 W--> 43 acgagcttca gctnttgagg agcgtgctgc tgt 153
 45 <210> SEQ ID NO: 3
 46 <211> LENGTH: 361
 47 <212> TYPE: DNA
 48 <213> ORGANISM: Mus musculus
 50 <220> FEATURE:
 51 <221> NAME/KEY: misc_feature
 52 <222> LOCATION: (1)...(361)
 53 <223> OTHER INFORMATION: n = A,T,C or G
 55 <400> SEQUENCE: 3
 W--> 56 aacatcgatc atgtcatttc ctgcttggga acgaattcag cctctcatan cgggcaacag 60
 57 caccaaggcc tgaaaggaag gcttgcctgg tgccaggaag caggacattg cattaaaaag 120
 58 caggtctggt tcagcactaa tccctaccta cttctgcttg gtcccgccag ctgcgtacca 180
 59 tggattcctg agatcttttt gttccggctc acttccctcc tctggccatc aacctaagga 240
 W--> 60 ggtcctggtt gcaagccatt gtccatgaca ttgctttttg tttgggtttt tgattgntga 300
 W--> 61 gtctggtctt gaacttgnga tcttctgcc tcttcaatgn naagngaacc accatccctg 360

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62 a 361
64 <210> SEQ ID NO: 4
65 <211> LENGTH: 239
66 <212> TYPE: DNA
67 <213> ORGANISM: Mus musculus
69 <220> FEATURE:
70 <221> NAME/KEY: misc_feature
71 <222> LOCATION: (1)...(239)
72 <223> OTHER INFORMATION: n = A,T,C or G
74 <400> SEQUENCE: 4
W--> 75 taggacccag aagatgtgtg tgcgagattg tgtcttctan aaatgatggg gacgcttcac 60
W--> 76 ccatgttacc caaacagtat ggttgtctaa acaagaccgg aacatganca tcaccaacag 120
77 acatgccaat atggaaagga aatcccctgg agtccttaag aactacagtc ggccctcgga 180
W--> 78 ttgttgggag tggggaggag tcttntgtct caccangna tgaccctgct accgcctat 239
80 <210> SEQ ID NO: 5
81 <211> LENGTH: 210
82 <212> TYPE: DNA
83 <213> ORGANISM: Mus musculus
85 <220> FEATURE:
86 <221> NAME/KEY: misc_feature
87 <222> LOCATION: (1)...(210)
88 <223> OTHER INFORMATION: n = A,T,C or G
90 <400> SEQUENCE: 5
W--> 91 gagacatgct gatgctggga caaagaatgg tgctgncatg agctttcaga gtactctgac 60
W--> 92 nacggtgact gggaagctgt ttggacatn nggncctntn cccacccttg nttgcctatn 120
W--> 93 ttccagattg gatnancctgc cttccttcaa gcttttaaac ctngnncggg agagaacatg 180
W--> 94 aagactggaa acnaccttta aaaacttaat 210
96 <210> SEQ ID NO: 6
97 <211> LENGTH: 264
98 <212> TYPE: DNA
99 <213> ORGANISM: Mus musculus
101 <220> FEATURE:
102 <221> NAME/KEY: misc_feature
103 <222> LOCATION: (1)...(264)
104 <223> OTHER INFORMATION: n = A,T,C or G
106 <400> SEQUENCE: 6
W--> 107 gactgaggtg ggggtctttca ggaggagagg aagncgacga cgacgacgct agttactgca 60
W--> 108 cggaaagcag cttcaggagc catagtacat acagcagcac tccanntaan naccctaaagn 120
W--> 109 nnangggnga nngnttcnc acctnctccc tcccctggc ttgctccctc tccagtgcag 180
110 tgcacctctg ttcctagctc cccccccct tcccgccctg tccccacgc ggaggccacg 240
W--> 111 gcgcgtntag tgacaaaaaa aaaa 264
113 <210> SEQ ID NO: 7
114 <211> LENGTH: 355
115 <212> TYPE: DNA
116 <213> ORGANISM: Mus musculus
118 <220> FEATURE:
119 <221> NAME/KEY: misc_feature
120 <222> LOCATION: (1)...(355)
121 <223> OTHER INFORMATION: n = A,T,C or G

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123 <400> SEQUENCE: 7
124 gaactgagat ctccagtcca ggatttcccc tgggtccacga atcttggttg aatgccttcg      60
125 gagcatcact gatccaggag ctgaccttct gtcatttaca tggcgtctoc ttgatgaaat      120
126 attctccage tgcttaagaa catagtgaac agtttctcac ggattccaac ttgaacaaaa      180
127 atcacacctc catccttggt caacagaccc ccaaagcatc tacttttcca agtacacaca      240
W--> 128 ctcaggaggc agageccaagt ggaccttttg agttcaagcc caacgtgggc tacanaagca      300
129 aagtttcagg acagccaggg cttcataaat agatcttgtc tcaaataaaa aagaa          355
131 <210> SEQ ID NO: 8
132 <211> LENGTH: 188
133 <212> TYPE: DNA
134 <213> ORGANISM: Mus musculus
136 <220> FEATURE:
137 <221> NAME/KEY: misc_feature ✓
138 <222> LOCATION: (1)...(188)
139 <223> OTHER INFORMATION: n = A,T,C or G ✓
141 <400> SEQUENCE: 8
W--> 142 actgagtatg tgtgtgccgg nagagttcaa agcagggttc cggcatcccc tggacattat      60
143 caatagtggg caaggacctc aggtttctgg agagaacagc aagagctott aatggcccag      120
W--> 144 ccaactccca agtctcttca gttatatttt ttccaagaat tacntaaaag aggctattaa 8 ✓ 180
145 aaaaaaaaa
147 <210> SEQ ID NO: 9
148 <211> LENGTH: 436
149 <212> TYPE: DNA
150 <213> ORGANISM: Mus musculus
152 <220> FEATURE:
153 <221> NAME/KEY: misc_feature
154 <222> LOCATION: (1)...(436)
155 <223> OTHER INFORMATION: n = A,T,C or G ✓
157 <400> SEQUENCE: 9
W--> 158 aatgaaggac cctganactn ctengaagaa gggattgatg cnggncgctt ttggaatgat      60
W--> 159 acagaacnnn ctacaaccag aaacactagn aaaggccact gaaaangcta acgcctaaac      120
W--> 160 ccgggtntna angcnntccg cacnccggcc cagnntacgg naccgncttt cagccaggcc      180
W--> 161 tnggganagc aagagtgaag aaatgcccag gggagttcca agccgccttt tcccaactna      240
W--> 162 agggccccgg actttgnttg nccgttgctg aaaganccct atagacaaag atgagaagac      300
W--> 163 nttnttngaa ttgatcagag acaaaaaagg gctcgaanna aangagtttt ganccgnaca      360
W--> 164 ccgtaccatt taaatgtgtc tgctctttct ggnntnaatc aaanaaaggg atccctntgg      420
165 aaatacgaat attcgg          436
167 <210> SEQ ID NO: 10
168 <211> LENGTH: 306
169 <212> TYPE: DNA
170 <213> ORGANISM: Mus musculus
172 <220> FEATURE:
173 <221> NAME/KEY: misc_feature ✓
174 <222> LOCATION: (1)...(306)
175 <223> OTHER INFORMATION: n = A,T,C or G ✓
177 <400> SEQUENCE: 10
W--> 178 gactgaggtg gccctctagc tgcactggcc ctccacanct atggcctcct gccagactc ✓ 60
179 agataatagc tgggtgctcg ctggttctga gaatctgcct gtggagactc tgggcccaga      120
180 acccaggatg gaccagaat ctgagggagc ctcccaggcc cttcgggact cctccaaggc      180

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```

181 agatggcaaa gaattagctt gggaccttgg atggagaaga gaagcttttc cagacggaaa      240
182 gttcccagag agaaactgct gttctgacag agtctgcggc caagggcact ctgggagccg      300
183 atggtc                                           306
185 <210> SEQ ID NO: 11
186 <211> LENGTH: 205
187 <212> TYPE: DNA
188 <213> ORGANISM: Mus musculus
190 <220> FEATURE:
191 <221> NAME/KEY: misc_feature
192 <222> LOCATION: (1)...(205) ✓
193 <223> OTHER INFORMATION: n = A,T,C or G
195 <400> SEQUENCE: 11
W--> 196 gctgcccgtc cctccagata ctctgctggg ctctganggg gctncttgaa ttgaccctta      60
W--> 197 ngtgttngct tgnngagccc aatgtntnta aaagaaggca tgttctgac caaagtgtta      120
198 tcgtcaagtg tgctaattta accagactga ctacagatg gcttctttaa taaataaacc ✓ 180
199 cttttcctat ttttaaaaaa aaaaa                                           205
201 <210> SEQ ID NO: 12
202 <211> LENGTH: 267
203 <212> TYPE: DNA
204 <213> ORGANISM: Mus musculus
206 <220> FEATURE:
207 <221> NAME/KEY: misc_feature
208 <222> LOCATION: (1)...(267) ✓
209 <223> OTHER INFORMATION: n = A,T,C or G ✓
211 <400> SEQUENCE: 12
W--> 212 cagctcacga tgccagganc tgaccaatna ctactttggn ttcagtggat ggtcgaaaag      60
W--> 213 gatcatcaag ctgcaggagc tctccgnact ggangatgca gctctcagct gtgcccattg      120
W--> 214 anaaggggag ccccagatn ctntgcgtg tanaggaggt gctgcccccc tacggatgca      180
W--> 215 gnagccctgg ggttggcatc tctgaggagc ctntgcacca gctggaggaa gggaagagct      240
W--> 216 ggntaattat gaacaggaag acagctc ✓ 267
218 <210> SEQ ID NO: 13
219 <211> LENGTH: 282 ✓
220 <212> TYPE: DNA
221 <213> ORGANISM: Mus musculus
223 <220> FEATURE:
224 <221> NAME/KEY: misc_feature
225 <222> LOCATION: (1)...(282) ✓
226 <223> OTHER INFORMATION: n = A,T,C or G
228 <400> SEQUENCE: 13
W--> 229 tttagaacc cgaggncaag acccacctga nttntagaat gagngacaaa acccncctn      60
W--> 230 ncatnattna tnannaattt caagangggc agctcgaana ngcntcngcn gnnctctatt      120
W--> 231 catctacan ggacaagggg gcaactcatg ntttcagagg aattcctatc tccgagctga      180
W--> 232 cgaaccatgg gattctccag gccctgacgg nagaacacca atgggtggca nacaggtgnt      240
W--> 233 gggagtgaag aggnccctaaa gccaggaag agtgggaagt gg ✓ 282
235 <210> SEQ ID NO: 14
236 <211> LENGTH: 421
237 <212> TYPE: DNA
238 <213> ORGANISM: Mus musculus
240 <220> FEATURE:

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241 <221> NAME/KEY: misc_feature
242 <222> LOCATION: (1)...(421)
243 <223> OTHER INFORMATION: n = A,T,C or G ✓
245 <400> SEQUENCE: 14
W--> 246 gactgaggtt tctggacaga cctagnctt caccaagaga attcaacttg gaaaccaaga      60
      247 ctggtagact ctctgttctt ccgacaagag gcagaagtca gagagagact gcggattctt      120
      248 gggacacctg ttttctttt ggaggacacc gagtctttg agaagacagt tcaatatggc      180
      249 aaaggaactg aaagaacggg gaggagccgt tactgtgatt tggtgacggt tcttcagaca      240
      250 accagtgtct taaggaaaac tgggacagag aacttctgaa ctttttgggt tcgttaagtg      300
      251 agaagtcagc atggctcagg taaaaagctc tcgagtcctc cttcaagacc gttcactggg      360
W--> 252 aagcctcttt gcagngtcac ccttgaattc tgccttagcc aacagtattg accatcccca ✓ 420
      253 g                                                                                     421
255 <210> SEQ ID NO: 15
256 <211> LENGTH: 240
257 <212> TYPE: DNA
258 <213> ORGANISM: Mus musculus
260 <400> SEQUENCE: 15
261 agattctcat gcctgtgacc caggctggtc tggaactaat tatgtagcca gacttgcccta      60
262 aaattcatgg cagtcctctt gcctcagcct cttgtgtggt gggattacag acttgagcaa      120
263 cattcttcag tgcatttctt aggaatcttg gctaaaaaaa tccaagttaa tcacacacaa      180
264 gttctacctt tattggaata aattcaatca agttctttgt gttccttcca aaaaaaaaaa      240
266 <210> SEQ ID NO: 16
267 <211> LENGTH: 111
268 <212> TYPE: DNA
269 <213> ORGANISM: Mus musculus
271 <220> FEATURE:
272 <221> NAME/KEY: misc_feature
273 <222> LOCATION: (1)...(111)
274 <223> OTHER INFORMATION: n = A,T,C or G
276 <400> SEQUENCE: 16
W--> 277 ggtaagga cactgactgc atcttccaaa ggtinctgant tcatcatccn agcaaccaca      60
W--> 278 tggcggcct cacaancatg tgtaangnga tcttgacagc cctcttctgg t ✓ 111
280 <210> SEQ ID NO: 17
281 <211> LENGTH: 542
282 <212> TYPE: DNA
283 <213> ORGANISM: Mus musculus
285 <220> FEATURE:
286 <221> NAME/KEY: misc_feature
287 <222> LOCATION: (1)...(542)
288 <223> OTHER INFORMATION: n = A,T,C or G
290 <400> SEQUENCE: 17
291 tgagacccca gggccgcagc tttggagcct tacaagggcc taggccgctc gccgtacact      60
W--> 292 ttcccgctcc cggacgacga gggctcccga ggcaaaagaa ggggctgnct agcactcgag      120
W--> 293 aacgcttctg ggaaatgtan tccgcgattg gaactggcgg ngaagatggc atccattctc      180
W--> 294 ggatttcccg ccagagcacg gctgaggca ggccgaggag ctcgttcnc attttcaatt      240
      295 ttgtgcgtga aattcctaga cagatataca aactcggaca gaaactotta caatgcattg      300
      296 agcccttcc atgatagggg gccaatctca gagaatcact gtatgttttt ggagtagggt      360
      297 tgcaccgaa gttgtgtaga gtcgcgtgta tttctgggaa atgtagtcta aaaaaggaa      420
W--> 298 tgcgtggcac tggctcctg gaacaaagtt gttngaaatg atttctgaga taccacacc      480

```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

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Input Set : A:\LEX-0126-USA SEQUENCE LISTING.txt

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:41 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:43 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:76 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:78 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:93 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:94 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:160 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:213 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:216 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:229 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:246 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:252 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:278 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

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L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19